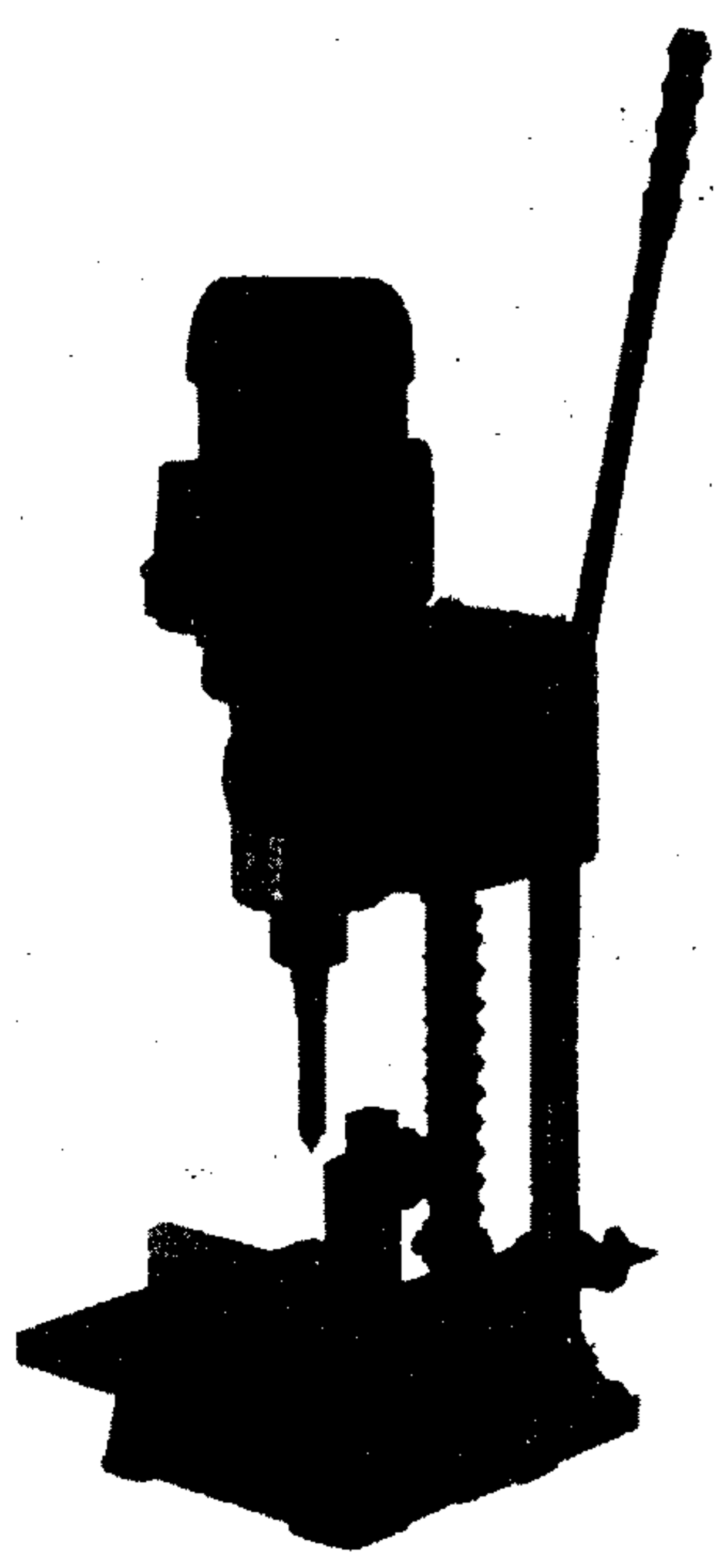


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CENTRAL MACHINERY®

MORTISING MACHINE

Model 35570



Distributed Exclusively by
**HARBOR FREIGHT
TOOLS**

3491 Mission Oaks Blvd. / Camarillo, CA 93011

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For technical questions and replacement parts, please call 1-800-444-3353.

SPECIFICATIONS

Motor:	1/2 HP, 2.3 Amps @ 110V, 60Hz,
Speed:	3580 RPM
Vertical Capacity:	5"
Throat:	5"
Table:	13-3/8" x 6"
Base:	10" x 7-3/4"
Overall Weight:	54 lbs.

SAVE THIS MANUAL

You will need this manual for the safety instructions, assembly instructions, operating procedures, parts list, and diagram. Put them in a safe, dry place for future reference.

IMPORTANT SAFETY PRECAUTIONS

WARNING: When using electric tools, machines or equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury.

READ ALL INSTRUCTIONS BEFORE USING THIS TOOL

1. **KEEP WORK AREA CLEAN.** Cluttered areas invite injuries.
2. **CONSIDER WORK AREA CONDITIONS.** Don't use machines or power tools in damp, wet, or poorly lit locations. Don't expose to rain. Keep work area well lit. Don't use tools in the presence of flammable gases or liquids.
3. **KEEP CHILDREN AWAY.** All children should be kept away from the work area. Don't let them handle machines, tools or extension cords.
4. **STORE IDLE EQUIPMENT.** When not in use, tools should be locked up in a dry location to inhibit rust. If possible, store in an area out of reach of children.
5. **DON'T FORCE THE MACHINE OR TOOL.** It will do the job better and more safely at the rate for which it was intended.
6. **USE THE RIGHT TOOL.** Don't force a small tool or attachment to do the work of a larger industrial tool. Don't use a tool for a purpose for which it was not intended.
7. **DRESS PROPERLY.** Don't wear loose clothing or jewelry. They can be caught in moving parts. Protective, electrically non-conductive gloves and non-skid footwear are recommended when working. Wear protective hair covering to contain long hair, preventing it from getting caught in machinery.
8. **USE EYE AND EAR PROTECTION.** Use a full face mask as the mortising machine will produce wood chips. Wear a clean dust mask due to fine or coarse dust. When operating for extended periods of time, use approved ear protection. Face masks, dust masks, and ear protectors are available from Harbor Freight Tools.
9. **DON'T ABUSE THE POWER CORD.** Do not yank it to disconnect it from receptacle. Do not move bench-mounted or floor-standing machines with the power cord in the outlet. Keep cord away from heat, oil, and sharp edges.
10. **SECURE WORK.** Use the included clamps or a vise to hold the work. It's safer than using your hands and it frees both hands to operate the tool.

11. **KEEP PROPER FOOTING AND BALANCE AT ALL TIMES.** Do not reach over or across machines that are running.
12. **MAINTAIN TOOLS WITH CARE.** Keep tool clean and bits and chisels sharp to provide better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have them repaired by an authorized service facility. Keep handles dry, clean, and free from oil and grease.
13. **DISCONNECT POWER.** Unplug when not in use, before servicing, and when changing accessories such as blades, bits, and cutters.
14. **REMOVE ADJUSTING KEYS AND WRENCHES.** Make it a habit to check that keys and adjusting wrenches are removed from the tool or machine work surface before plugging it in.
15. **AVOID UNINTENTIONAL STARTING.** Be sure the switch is in the OFF position when not in use and before plugging in.
16. **OUTDOOR EXTENSION CORDS.** When the equipment is operated outdoors, use only extension cords intended for outside use. See chart under "Extension Cords" for the proper AWG rating depending upon length of the cord.
17. **STAY ALERT.** Watch what you are doing, use common sense. Don't operate any tool when you are tired.
18. **CHECK DAMAGED PARTS.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and other conditions that may affect its operation. Any part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in the instruction manual. Have defective switches replaced by an authorized service center. Don't use the tool if switch does not turn on and off properly.
19. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces: pipes, radiators, ranges, and refrigerator enclosures.
20. **REPLACEMENT PARTS AND ACCESSORIES.** When servicing, use only identical replacement parts. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
21. **DO NOT OPERATE TOOL IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate machine.
22. **KEEP GUARDS IN PLACE.** All guards and fences need to be in proper working order and alignment. Check before every use.
23. **NEVER STAND ON TOOL.** If tool is tipped over or if blades or cutters are accidentally contacted, serious injury could result.
24. **NEVER LEAVE TOOL RUNNING UNATTENDED.** Always turn off power. Do not leave tool until it comes to a complete stop.

GROUNDING INSTRUCTIONS

This machine has a three-prong plug, the third (round) prong being the ground. Plug the machine's cord only into a three-prong receptacle. Do not cut off the round prong.

If a three-prong receptacle is not available, you may use an adapter, but you must then connect the green ear on the adapter to the outlet. Unscrew the center screw of the outlet cover



and put the screw through the green ear. Plug the adapter's two prongs into the outlet, and replace the center screw. Now plug the machine into the adapter.

VOLTAGE WARNING

Before connecting the tool to a power source (receptacle, outlet, etc.) be sure the voltage supplied is about the same as that specified on the nameplate of the tool. If one says 120V and the other says 110V then there will be no complications. Never try to plug a 110V tool into a 220V outlet, or the other way around. The plug and outlet have completely different shapes. This is because a power source with a voltage greater than that specified on the tool can result in a **SERIOUS INJURY** to the user—as well as damage to the tool. If in doubt, **DO NOT PLUG IN THE TOOL**. Using a power source with voltage (110V) less than the nameplate rating (220V) is harmful to the motor.

EXTENSION CORDS

Since your tool has a grounded, three-prong plug, you must use a three-prong extension cord with three-prong receptacles. Only use rounded jacket extension cords, preferably listed by the Underwriters Laboratories (UL). Make sure the cord is rated for outdoor use if you plan on using the tool outside; if you plan on indoor use, you may also use an outdoor rated cord. Extension cords rated for outdoor use have the letters "WA" on the cord jacket.

The extension cord must have a minimum wire size depending on the amperage of the tool and the length of the extension cord. This size is signified by its AWG (American Wire Gauge) rating; the smaller the gauge, the greater the cable's capacity. If you are using two or more cords, the total length of the combined cords must be used to determine the minimum AWG rating. Each of the cords used must meet this rating.

The chart below is used to determine the rating required according to the length of the cord(s). The amps of your tool are found either in this manual, or on the nameplate of the tool.

CORD(S) LENGTH (FEET)	25	50	75	100	125	150	175	200
WIRE GAUGE REQUIRED	18	18	16	16	14	14	12	12

Always inspect extension cords for any damage. If there are any loose, frayed or exposed wires, damaged insulation, or defective connections, replace the cord.

Harbor Freight Tools can supply UL listed and outdoor rated cords in multiple AWG ratings if needed.

UNPACKING

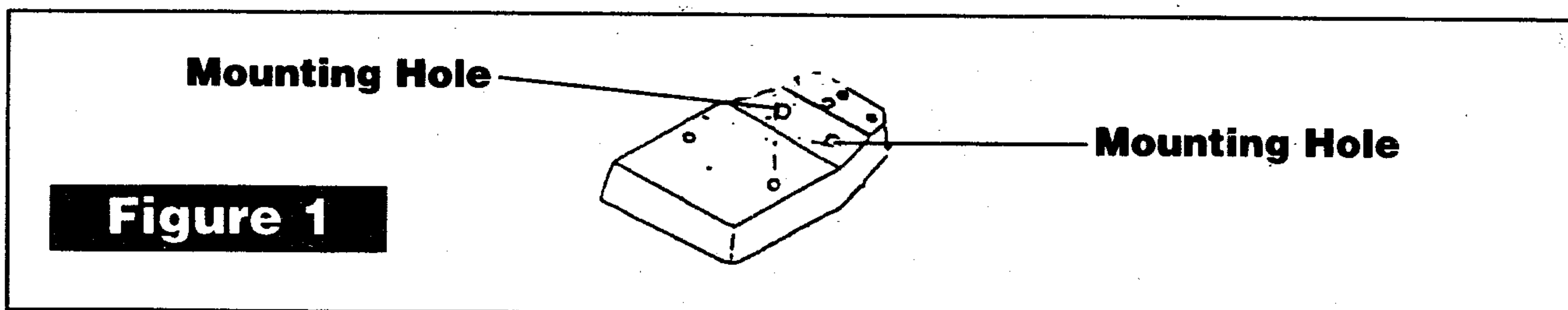
Make sure your tool includes all accessories and pieces required for operation. Check off according to the list below. If any pieces are missing, contact Harbor Freight Tools at the number on the front cover.

1. Mortising Machine
2. Handle (24)

3. Bracket A (4)
4. Two Hex Key Screws (5) (for bracket A)
5. Wood Base (6)
6. Two Screws (7, for wood base)
7. Fence (9)
8. Bracket B (11)
9. Four Screws (40, for fence assembly)
10. Clamp (8)
11. Two Knobs (12)
12. Two Washers (10)
13. Three chisels and mortising bits (1/4", 3/8", & 1/2")
14. Chuck Key

ASSEMBLY INSTRUCTIONS

1. Slide handle (24) into the receiver hole on the right side of the gear shaft (20). The handle's end should protrude about a 1/2". Tighten the set screw (19).
2. Using the handle, lower the head of the machine slightly. This will permit removal of the retaining half-washer located on the gear column (15). Gently allow the head assembly to move to the uppermost position.
3. Using a non-toxic & non-flammable solvent, clean the rust inhibitor from the base (3), guide column (16), gear column, gear casing (23), and all other required parts.
4. Attach bracket A (4) to base using the two supplied hex key screws (5).
5. Attach wood base (6) to base using two screws (7). **NOTE:** *If you are not mortising through holes and require extra capacity, the wood base can be removed.*
6. Attach fence (9) to bracket B (11) using the four screws (40, not shown).
7. Attach clamp (8) to bracket B using one knob (12) and washer (10).
8. Attach bracket B to bracket A using the remaining knob and washer.
9. For best performance, your Mortising Machine should be permanently mounted to your workbench. Two holes near the rear of the base are provided for this purpose (see **figure 1**, below). If you do not wish permanent mounting, you must clamp the machine down prior to use.

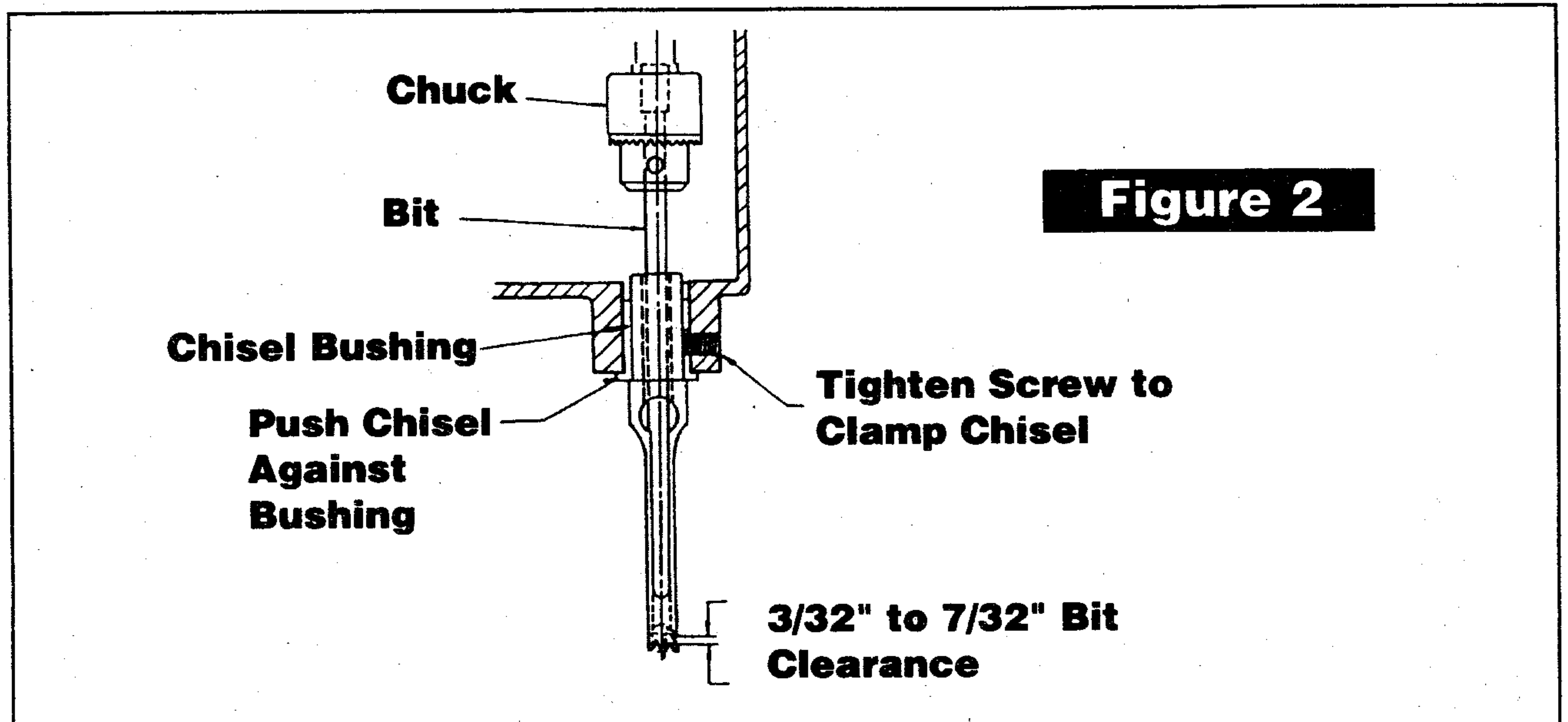


OPERATING PROCEDURES

Attaching Chisels and Bits (see figure 2, below):

1. Remove left and right covers (39).
2. Loosen the chuck (35) with the chuck key.
3. Loosen the chisel bushing screw (37).

4. Slide the bit into the chisel.
5. Insert the chisel into the bushing (38) and the bit into the chuck. Make sure the chisel's slot is facing either the right or left to provide for proper chip ejection.
6. Make sure there is at least $\frac{3}{32}$ "- $\frac{7}{32}$ " of bit protruding from the end of the chisel, then tighten the chuck. Make sure to tighten at all three spots.
7. Tighten the busing screw, and replace the left and right covers.

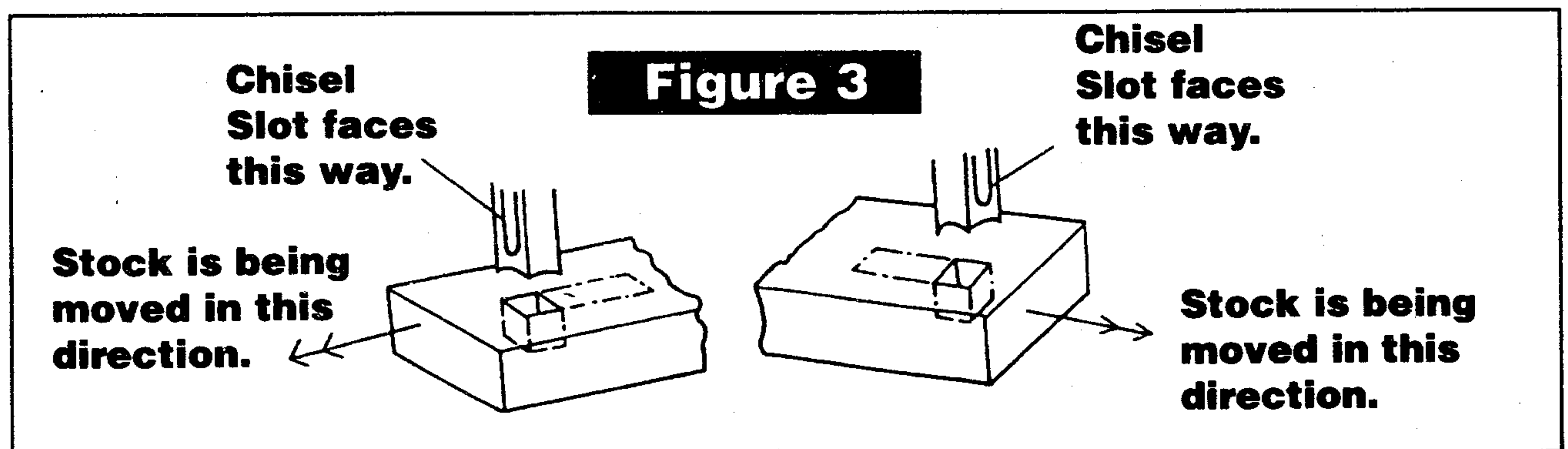


Mortising:

1. Set the fence (9) so that the chisel will mortise your stock in the desired position.
2. Set the hold down clamp (8) so that it securely holds your stock.
3. Set the depth stop (18) at the position required according to the desired depth of the mortise.
4. Turn machine on. It should reach full speed in a few seconds.
5. Slowly lower handle until mortise is complete.
6. Do not mortise holes deeper than 1" at a time. If you wish to mortise to a depth greater than 1", do so in a couple of passes. This will allow the chips to be properly ejected.

Slots:

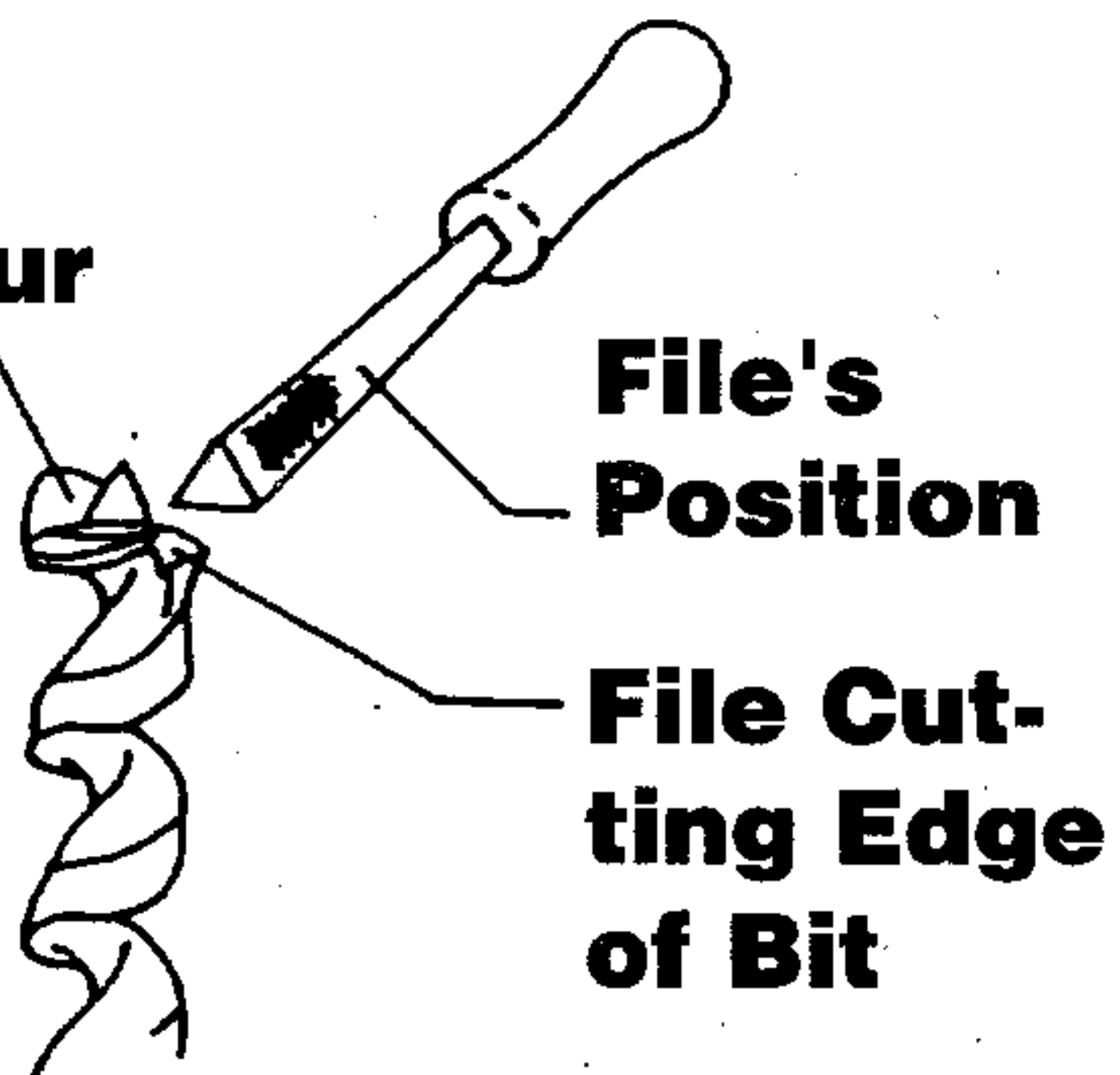
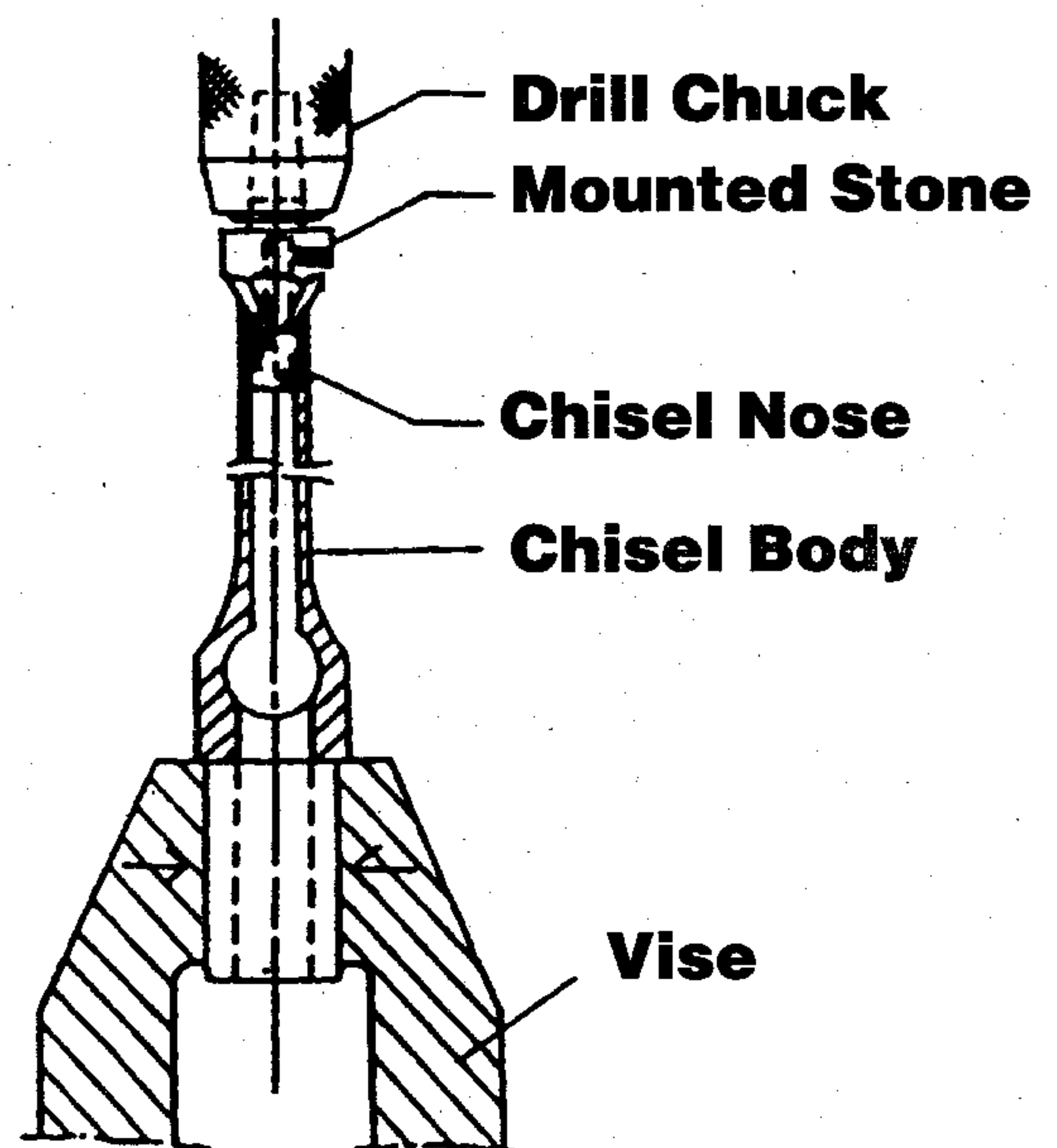
Slots and mortises longer or wider than $\frac{1}{2}$ " can be accomplished simply by moving the wood after the initial cut is accomplished. When doing so, make sure the slot in the chisel is facing the direction you are moving the wood for proper chip ejection. Other than that, the procedure is identical to regular mortising. (See **figure 3** below.)



MAINTENANCE**Bit and Chisel Sharpening:**

If the bit is dull, it can break the chisel, resulting in operator injury. It is sharpenable, however, if there is any sign of wear along the twist (such as irregular grooves or hollows) the bit must be replaced. Chisels cannot be sharpened if the walls become noticeably thin. Typically, you will replace a bit three times as often as a chisel. Replacement bits and chisels are available from Harbor Freight Tools.

1. To sharpen the bit, use a three cornered file and sharpen the inner edge of the spur and the cutting edge of the twist.
2. To sharpen the chisel, first fix it in a vise. Use a tapered stone or rotary file in a drill. Set the RPM's very low or the temper of the chisel will be affected. Use a file to remove any burrs on the outside face of the chisel.

Figure 4**File Inner
Edge of Spur****File's
Position****File Cut-
ting Edge
of Bit****Figure 5****Drill Chuck****Mounted Stone****Chisel Nose****Chisel Body****Vise****Lubrication:**

1. Before every use, lubricate the both columns with a light machine oil. Clean them after every use to prevent accumulation of foreign matter.
2. After every 30 days of use, grease the gears inside the head. They are accessible through the panel on the underside of the head.

TROUBLE SHOOTING

Problem	Cause	Solution
• Will not start.	<ul style="list-style-type: none"> • Not plugged in. • Fuse or circuit blown. • Socket does not function. 	<ul style="list-style-type: none"> • Plug in. • Replace fuse or reset circuit. • Test socket with current tester or trying another tool in socket. If socket doesn't work, have it replaced by a qualified electrician.
	<ul style="list-style-type: none"> • Damaged cord or plug. 	<ul style="list-style-type: none"> • Have replaced by a qualified technician.
	<ul style="list-style-type: none"> • Switch not functioning. 	<ul style="list-style-type: none"> • Have switch replaced by a qualified technician.
	<ul style="list-style-type: none"> • Motor not working. 	<ul style="list-style-type: none"> • Contact Harbor Freight Tools for servicing.
• Machine starts, but bit does not move.	<ul style="list-style-type: none"> • Worn or broken gears. 	<ul style="list-style-type: none"> • Replace gears.
• Operation interrupted.	<ul style="list-style-type: none"> • Forcing unit. • Overloaded circuit. 	<ul style="list-style-type: none"> • Apply less pressure. • Use on isolated circuit. • Check for adequate amp rating. Install proper fuses/breakers for circuit.
• Broken Chisels.	<ul style="list-style-type: none"> • Worn bit. 	Sharpen or replace bit
• Chips clogged in Chisel.	<ul style="list-style-type: none"> • Chisels slot facing forward or backward. 	<ul style="list-style-type: none"> • Face slot to right or left.
• Torn or rough mortises.	<ul style="list-style-type: none"> • Dull chisel. 	<ul style="list-style-type: none"> • Replace or sharpen.

PARTS LIST

#	Description
1.	Bolt
2.	Lock Washer
3.	Base
4.	Bracket A
5.	Hex Key Screw
6.	Wood Base
7.	Screw
8.	Hold Down Clamp
9.	Fence </td
10.	Washer
11.	Bracket B
12.	Knob
12A.	Handle
13.	Spring
15.	Gear Column
16.	Guide Column
17.	Knob
18.	Depth Set Guide
19.	Set Screw
20.	Gear Shaft
21.	Gear
22.	Gear Access Plate
23.	Gear Casing
24.	Handle
25.	Guide Sleeve
26.	Stop Plate
27.	Washer
28.	Bolt
29.	Motor
30.	Power Cord
31.	Switch
32.	ID Plate
33.	Nut
34.	Inner Spring
35.	Chuck
36.	Screw
37.	Chisel Bushing Screw
38.	Chisel Bushing
39.	Guard Cover
40.	Screw (not shown)

#35570 Parts Diagram